☐ 1: AL021711. Arabidopsis thali...[gi:5738363]   Links

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LOCUS       ATF13C5                119111 bp    DNA     linear   PLN 10-MAR-2000
DEFINITION  Arabidopsis thaliana DNA chromosome 4, BAC clone F13C5 (ESSA
            project).
ACCESSION   AL021711
VERSION     AL021711.2  GI:5738363
KEYWORDS    .
SOURCE      Arabidopsis thaliana (thale cress)
  ORGANISM  Arabidopsis thaliana
            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
            Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
            rosids; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
REFERENCE   1  (bases 1 to 4778)
  AUTHORS   Bevan,M., Robben,J., Grymonprez,B., Volckaert,G., Bancroft,I.,
            Mewes,H.W., Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   2  (bases 4495 to 119111)
  AUTHORS   Bevan,M., Pohl,T., Weizenegger,T., Bancroft,I., Mewes,H.W.,
            Lemcke,K. and Mayer,K.F.X.
  JOURNAL   Unpublished
REFERENCE   3  (bases 1 to 119111)
  AUTHORS   EU Arabidopsis sequencing,project.
  TITLE     Direct Submission
  JOURNAL   Submitted (09-MAR-2000) MIPS, at the Max-Planck-Institut fuer
            Biochemie, Am Klopferspitz 18a, D-82152 Martinsried, FRG, E-mail:
            lemcke@mips.biochem.mpg.de,mayer@mips.biochem.mpg.de Project
            Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge
            Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK,
            E-mail: michael.bevan@bbsrc.ac.uk
COMMENT     On Aug 18, 1999 this sequence version replaced gi:2832611.
            Information on performance of analysis and a more detailed
            annotation of this entry and other sequences of chromosomes 3, 4
            and 5 can be viewed at: http://www.mips.biochem.mpg.de/proj/thal/.
FEATURES             Location/Qualifiers
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                       contains EST gb:Z25684, Z37674, AI992959.1, T46449"
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               SKGVLLTHRNLIASMELFVRFEASQYEYPGSSNVYLAALPLCHIYGLSLFVMGLLSLG
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                          82897..83145,83312..83512,83640..83969,84042..84110,
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                          GNFDSVCSVPVTGKFGSRKRKSNSALDKKESSDSEGLTFKDIAVIAKSLEMEIISECQ
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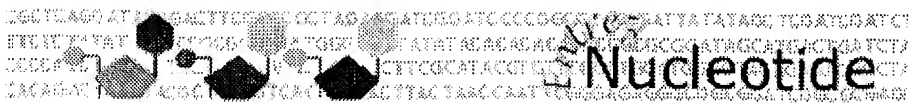
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            Coordinator: Mike Bevan, Molecular Genetics Department, Cambridge
            Laboratory, John Innes Centre, Colney Lane, NR4 7UJ Norwich, UK,
            E-mail: michael.bevan@bbsrc.ac.uk
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                FDISENRFSGVLPSDYFVGWSVMSSFVDIIDNTPGFTVVGDDQESFHKSVVLTIKGLN
                MELVGSGFEIYKTIDVSGNRLEGDIPESIGILKELIVLNMSNNAFTGHIPPSLSNLSN
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                7236..7913))
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CDS             complement(join(5905..6149,6243..6344,6436..6826,
                7236..7913))
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                contains EST gb:1565775"
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                              QIVTNGTENHLVLWDLRPLGLTGNKVEKLCDLCSITLNKNAVFGDSSALAPGGVRIGA
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                              GQVPDPTSTDNPEFQIVLSIIKEGLQVDPKKYHKMKERLVGVSEETTTGVKRLYQMQQ
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     exon                     13822..14568
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                VNWGGKDVNVSNASLKILTVNYNICLGTFSVDTPSLVYFCFTEYVAIDYPVVIMQNLF
                EARISLLVTQDQIERARAPNIDWVEDDVVLRLVNMEKLIKGIRNVQYMYLSPNTLEVL
                SLCCESMPVFNNLKSLTLKSHKSRGWQAMPVLLRNCPHLETLVLEGILHHVTDKCGYA
                CDCVSREEKGCSLTSCPVKVLEIKGFRGTIKEMHMIKHFVNYFPCLMETNIYIEESGP
                PKLRVPQVCEFIAEMMEHYGKSSSFNVQLLVGGYLYKKWTAQ"
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intron          complement(19138..19211)
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                         genes for 10 kD phosphoprotein"
     gene                28588..31830
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                         30426..30661,30705..31192,31237..31356,31719..31830))
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                         30426..30661,30705..31192,31237..31356,31719..31830))
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                         /note="weak similarity to F54E4.1, Caenorhabditis elegans"
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                         AAGTRAMFAPYISEDLRLRVSSLLYVGVSVETIMQRHNESVEKQGGPSNRDDLLTHRY
                         VRRLERSIRRSTYELDEDDDVSISMWVESHQSHVFFFEGFSDTDPFSLGIQTEWQLQQ
                         MIRFGNCRLLASDSRFGTNTLKDDSQVYVLVYFQYPIHSLVVFDSENKAIPVAWIIAP
                         RFSSGDAYRWMRALCNRVHAKDPSWKVAGFIVDDPFADIIAIRDVFQCPVLFSFWRLR
                         HAWHKNIIKRCRETKTRVEISRHLGQAVDKISRRQGTATLFDSFVEDFVGSPEFVEYF
                         RSVWSPRIGAWTSALQSLPLASQETCAAMELYHYQLKCRLLNERDSEAYQRADWLVDK
                         LGTKVHSYFWLDEYSGKDNFARYWKEEWVSGLTSFRKALSIPDSDVVISGMSAKITDE
                         CDGNEIHVVWNPGSQFGVCSCSWAEKGYIFSLAVSVEKQINALGYLQKSDANEGNLQK
                         EIAFSEPSSGKSLDESDLLDKHEGHGEVATDLDGGLSKMPMSCLRVCSGNAEDIISGS
                         EMEIGLSPGSTKAAAEDVTSTVQNGTDSANENCERGAKRLKIWAPENGVYE"
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     exon                complement(29145..29555)
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                     Contains HSF-type DNA-binding domain signature
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                     FAFEMLVSGCPVLESLSVNKINLNDISENDDDYLEVVIDAPRLHYLKLNDKRTASFIM
                     KNHGSLLKADIDFVFNLGSEYMFDPNYLPTRHIIRDFLVGLSGVKDMIISSSTLQVIY
                     DYSRCEQLPLFRNVSFLRVEFADYRWEMLPIFLESCPNLKSLVLGFSIPPGKEGANIL
                     PGPRRFLTSLEYVKIAKPMAAEASEIKLKLVNSTMNGALGNSSASVSGGEGAGGPAPF
                     LVKTYEMVDDSSTDQIVSWSANNNSFIVWNHAEFSRLLLPTYFKHNNFSSFIRQLNTY
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                     RLELSPADSDMNMVSHSIQSSNEEGASPKGILSGGDPNTTLTKREGLPFAPEALELAD
                     TGTCPRRLLLNDNTRVETLQQRLTSSEETDGSFSCHLNLTLASAPLPDKTASQIAKTT
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                              MINYRCLTNDSSLASAVFVPFYAGLDMSRYLWGFNITKEWGRMSGRDHFLVSGRIAWD
                              FRRQTDNESDWGSKLRFLPESRNMSMLSIESSSWKNDYAIPYPTCFHPRSVDEIVEWQ
                              ELMRSRKREYLFTFAGAPRPEYKDSVRGKIIDECLESKKQCYLLDCNYGNVNCDNPVN
                              VMKVFRNSVFCLQPPGCIPVFFHPGTAYAQYKWHLPKNHSSYSVYLPVKDVKEWNIKI
                              KERLIEIPEERVVRLREEVIRLIPKVVYADPKYGSDGSEDAFELAVKGMLERIEEVRE
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                              FFAGEWSEVHQVLPLVNSDGETNKKGGYDIILMAETIYSISAQKSQYELIKRCLAYPD
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                           HPKYYRCRG"
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     gene                  56013..58057
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     gene                  complement(join(56013..56294,56381..56653,56745..56852,
                           56957..57188,57271..57498,57589..57784,57904..58057))
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                           56957..57188,57271..57498,57589..57784,57904..58057))
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                           hepatic, mouse
                           contains EST gb:416465"
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                           /product="selenium-binding protein like"
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                              TGEILVSCLGDEEGNAKGNGFLLLDSDFNIKNRWEKPGHSPLYGYDFWYQPRHKTMIS
                              TSWGAPKAFSKGFNLQHVADGLYGSHLHVYSWPGGEIKQLIDLGPTGLLPLEIRFLHD
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                              VPQIKGKSLRGGPQMIQLSLDGKRLYATNSLFSAWDRQFYPEIMEKGSHIIQIDVDTE
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                              59538..59962,60043..60238,60576..60720))
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                              59538..59962,60043..60238,60576..60720))
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                              strong similarity to selenium-binding protein, hepatic,
                              mouse"
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                              MLVSCLGDKEGNAKGNGFLLLDSDFNVKSRWDKPGHGPLFGYDFWYQPRFKTMISTSW
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                              ISGFVQSGKGLEAFSVFTEMRRERVDILDPLVLSSIVGACANLAASIAGRQVHGNALI
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                              EEMRIRNGYVPDTSWILHDMDEQEKEKLLFWHSERSAVAYGLLKAVPGTPIRIVKNLR
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                              contains EST gb:948081"
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                             74410..74524,75126..75311,75743..75877))
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                             LLQIYRHSESVAIVVDNPEFFNRIAESFTSKASLRFLILLWGEKSSLVTQGMQIPVYS
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                             HQIKHLSKYVPAQAGDKFLSMLPSWHAYERASEYFIFTCGVEQMYTSIRYLKDDLKRY
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                             EQKPPMYIVAFVDWLWARVIAALLWPLHMLAKKLIYKKIHSSIGISKAGISGGGSLPI
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                LHGIHNIKVGTPLAMDSLRSSFPPSNGTFREEITGPVMLPLLKFLNGTNSYFFLNVHP
                YFRWSRNPMNTSLDFALFQGHSTYTDPQTGLVYRNLLDQMLDSVLFAMTKLGYPHMRL
                AISETGWPNFGDIDETGANILNAATYNRNLIKKMSASPPIGTPSRPGLPIPTFVFSLF
                NENQKSGSGTQRHWGILHPDGSPIYDVDFTGQTPLTGFNPLPKPTNNVPYKGQVWCVP
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intron          complement(78057..78138)
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                        83512..83652,83732..84018,84827..85083,85138..85592,
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                        GREAHIMTYEVGAVLEDEKWQAPVYCFNKEKKSLSTKGALSEFKGYKEKAALRSTRVN
                        KRDLLLCLFSLFEQVLNLHKTATNHHAFRLVFRKLKKMDLSGCRDIISSLPEAISCHI
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                          HLFDVEPIKLPKLPLITTGDLPSFLQPSKALPSALVTLREHIEALETESNPKILVNTF
                          SALEHDALTSVEKLKMIPIGPLVSSSEGKTDLFKSSDEDYTKWLDSKLERSVIYISLG
                          THADDLPEKHMEALTHGVLATNRPFLWIVREKNPEEKKKNRFLELIRGSDRGLVVGWC
                          SQTAVLAHCAVGCFVTHCGWNSTLESLESGVPVVAFPQFADQCTTAKLVEDTWRIGVK
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                         81, 493"
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                         control of plant development"
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                         /db_xref="GOA:P43255"
                         /db_xref="UniProt/Swiss-Prot:P43255"
                         /translation="MDLSPVKEALAAKSFDKIADICDTLMLQVASEGIEYHDDWPYAI
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                         WSQEAKDMVAAFSDLYTKRMFQLLLLSAYSTITIHDLALFLGMTEDDATTYVVENGWTV
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                                135470..135977))
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                                /note="weak similarity to a membrane-associated
                                salt-inducible protein, Nicotiana tabacum"
                                /codon_start=1
                                /product="hypothetical protein"
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                                LRMWRESCVRPDDFTLPLILRACSASREAKSGDLIHVLCLKLGFSSSLFVSSALVIMY
                                VDMGKLLHAPMFGGYVQQGEAMLGLAMFREMGYSGFALDSVVMHGKSVHGWCIRRCSC
                                LGLNLGNAITDMYVKCSILDYAHTVFVNMSRRDVISWSSLILGYGLDGDVVMSFKLFD
                                EMLKEGIEPNAVTFLGVLSACAHGGLVEKSWLYFRLMQEYNIVPELKHYASVADCMSR
                                AGLLEEAEKFLEDMPVKPDEAVMGAVLSGCKVYGNVEVGERVARELIQLKPRKASYYV
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          exon                  complement(135321..135421)
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     exon              complement(135470..135977)
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                       140021..140301,140372..141038,141117..141407)
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                       FGVLMSCENININSHIRDKEALVCQLVEGLQLPSEEIRGEILFALYKFSALQFTEQNV
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                       SKQIQVMVEENVADYIFEILRLSAEHSFRKRLVIGFPSVIRVLHYVGEVPCHPFQIQT
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                       TPSFGETADVLTSLQESLRHSILASLSLPEKDSTQILHAVYLLNEVYVYCTASTSINK
                       TICIELRHCVIDVCTSHLLPWFLSDVNEVNEEATLGIMETFHSILLQNSDIQAKEFAE
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                       QDLLFLLGQASSNNQELASCQSAALLIFHTSSIYNDRSLQNERYQISYSLEAERIIFH
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                       RSLTYWFAKLISEGDNYAATLLVNLLTQLAEKEEQENDVISILNLMNTIVSIFPTASN
                       NLSMNGIGSVIHRLVSGFSNSSLGTSFRTLLLLVFNILTSVQPAVLMIDESWYAVSIK
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                         143425..143829))
                         /gene="dl3135c"
                         /note="similarity to a membrane-associated salt-inducible
                         protein - Nicotiana tabacum"
                         /codon_start=1
                         /product="salt-inducible protein homolog"
                         /protein_id="CAB10198.1"
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                         /db_xref="UniProt/TrEMBL:O23278"
                         /translation="MNIVYLCNSQVDFDGTGLSAGVNKQEDASQNQEITLEKTTSWGT
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                         EWNSPAKYPVDLKREEKKVKGRPFWVPFVCCSNEDGDWSKDHFWAVIRFLRQSSRLHE
                         ILPNMKMTFCFFFQLQVFDTWKNLEPSRISENNYERIIRFLCEEKSMSEAIRAFRSMI
                         DDHELSPSLEIYNSIIHSYADDGKFEEAMFYLNHMKENGLLPITETYDGLIEAYGKWK
                         MYDEIVLCLKRMESDGCVRDHVTYNLLIREFSRGGLLKRMEQMYQSLMSRKMTLEPST
                         LLSMLEAYAEFGLIEKMEETCNKIIRFGISLDEGLVRKLANVYIENLMFSRLDDLGRG
                         ISASRTRRTELAWCLRLLCHARLVSRKGLDYVVKEMEEARVPWNTTFANIALLAYSKM
                         GDFTSIELLLSELRIKHVKLDLVTVGIVFDLSEARFDGTGVFMTWKKIGFLDKPVEMK
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     exon                complement(141486..142682)
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                              PEEHSLDDEQKPPTPSKNNLCFGWIKLGPTVVEKSAPTVVEKAANERIGDVSEEDVFT
                              DAVCEFSRSDSFKEETATNFPAKGTENPGETQQCNNSSTACEMKSSEVVQDSCEVPPV
                              EVESASENRQGAQHSTEGHSMSSETVIESSQEAQVIDGGDTISNDRLETECKGKLTKE
                              SQSKLASALGKREDTSDSSWNDEVIYSDVEGPYGFSSEATSMTHPDEASCIVSEDVPV
                              HTSPVKADATQVISASKSVPDDMPFVENADVYLHGIKGFEEFEVSHSVNPFLPETSKG
                              EECEIDTLTEAENLGIKPEGLSIGSEVSSSDKLLAGDKTEPQGQTDLVAVKEFPSAEN
                              ILISKINSEDIGMKAEEGKSSLGNAQTVESETLRVSLPAVDSVVVDSNADMSSAANKT
                              GLVDLAGNESELMQANVVAEKGNKPKDTLSSESSCYASPVSVVFEGSDASDQIKSSTE
                              TSKDSALQISAESKDEVCRESNNGRLVEESSFINEPNKTEYPISHFGSTGTAPDTVNT
                              ANQTSLEIGRTEFNRVVGGLGVIQANEVDGNVKAHNNYAEVPVTIESNDHRDFGRLQN
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     exon                     complement(145692..145873)
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     intron                   complement(146231..146271)
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     exon                     complement(146272..146281)
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     exon                complement(146494..146559)
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                         148805..148992,149144..149189,149365..149412,
                         149508..149610,149693..149906,150195..150314,
                         150543..150691,151256..151411,151589..151646,
                         152089..152177,152273..152405,152494..152661))
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                         148805..148992,149144..149189,149365..149412,
                         149508..149610,149693..149906,150195..150314,
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                         152089..152177,152273..152405,152494..152661))
                         /gene="dl3145c"
                         /note="this enzyme converts phytoene into zeta-carotene
                         via the intermediary of phytofluene by the symmetrical
                         introduction of two double bonds at the c-11 and c-11'
                         positions of phytoene
                         EC_number=1.3.-.-"
                         /codon_start=1
                         /product="phytoene dehydrogenase precursor (phytoene
                         desaturase)"
                         /protein_id="CAB10200.1"
                         /db_xref="GI:2244777"
                         /db_xref="GOA:Q07356"
                         /db_xref="UniProt/Swiss-Prot:Q07356"
                         /translation="MVVFGNVSAANLPYQNGFLEALSSGGCELMGHSFRVPTSQALKT
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                         AGLSTAKYLADAGHKPLLLEARDVLGGKIAAWKDEDGDWYETGLHIFFGAYPNVQNLF
                         GELGINDRLQWKEHSMIFAMPSKPGEFSRFDFPDVLPAPLNGIWAILRNNEMLTWPEK
                         IKFAIGLLPAMVGGQAYVEAQDGLSVKEWMEKQGVPERVTDEVFIAMSKALNFINPDE
                         LSMQCILIALNRFLQEKHGSKMAFLDGNPPERLCMPVVDHIRSLGGEVQLNSRIKKIE
                         LNDDGTVKSFLLTNGSTVEGDAYVFAAPVDILKLLLPDPWKEIPYFKKLDKLVGVPVI
                         NVHIWFDRKLKNTYDHLLFSRSNLLSVYADMSLTCKEYYDPNRSMLELVFAPAEEWIS
                         RTDSDIIDATMKELEKLFPDEISADQSKAKILKYHVVKTPRSVYKTIPNCEPCRPLQR
                         SPIEGFYLAGDYTKQKYLASMEGAVLSGKFCSQSIVQDYELLAASGPRKLSEATVSSS
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     intron              complement(148712..148804)
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     exon                complement(148805..148992)
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exon	complement(149693..149906)
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exon	complement(150543..150691)
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exon	complement(152273..152405)
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     exon            complement(152494..152661)
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     gene            153904..156046
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                     155716..156046)
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                     /product="RING-H2 finger protein RHF1a"
                     /protein_id="CAB46003.1"
                     /db_xref="GI:5280989"
                     /db_xref="UniProt/TrEMBL:O23280"
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                     RRRDGQISSSLVSSSDPTTIHPTDLVNLYRLSAISHVEHQNSNPCPSPGSMTPSPVSG
                     HSSIPADSNNGSRISPGPSPSRSSQSPKSPEASSLPEAIKSKLAAASAKYKESISKSK
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gene            complement(join(158742..158834,158912..159046,
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                160369..160452,160548..160624,160779..161022))
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CDS             complement(join(158742..158834,158912..159046,
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                160369..160452,160548..160624,160779..161022))
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                /note="similar to R04E5.2 in Caenorhabditis elegans cosmid
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                contains EST gb:947683"
                /codon_start=1
                /product="hypothetical protein"
                /protein_id="CAB10202.1"
                /db_xref="GI:2244779"
                /db_xref="UniProt/TrEMBL:O23281"
                /translation="MHPINAVVAARMLAGISQSNALQSEAIPFGSLEWITYAGISCFL
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                VLGHNDPLFRRAQLKALVSIHGEAAGKGGELTHDETTIISGALDLTEKTAQEAMTPIE
                STFSLDVNSKLDRVPANMPLYDILNEFQKGSSHMAAVVKVKGKSKGHPSTLHEENSGE
                SNVSSNNSELTAPLLLKREGNHDSVIVRIDKANGQSFISEAGRQGFSHTSEEIEDGDE
                EIVDETDEYIDVHKRIRVATVAAVAISSLARAPSGRRLLGPKGSGGPKTPKASSTPKP
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intron          complement(158835..158911)
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exon            complement(158912..159046)
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intron          complement(159047..159094)
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                /number=2
exon            complement(159095..159401)
                /gene="dl3155c"
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intron          complement(159402..159952)
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exon            complement(159953..160176)
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intron          complement(160177..160227)
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exon            complement(160228..160290)
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intron          complement(160291..160368)
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     exon                complement(160779..161022)
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                         162934..163329,163489..163665,163809..163876,
                         163974..164045,164162..164245,164312..164470,
                         164579..164662,164757..164833,164919..165165))
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                         163974..164045,164162..164245,164312..164470,
                         164579..164662,164757..164833,164919..165165))
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                         /product="hypothetical protein"
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                         /translation="MHLINAVAAARILSGIGQSNGNNGGEAIPFGSFEWITYAGISCF
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                         LMTLCYPIAFPIGKVNIVCLVKNVLECSLILDLVLGHNDALFRRAQLKALVSIHSQEA
                         GKGGELTHDETTIISGALDLTEKTAQEAMTPIESTFSLDVNSKLDWEAMGKILARGHS
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intron            182468..182543
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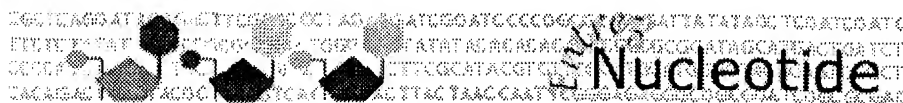
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Nucleotide

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